

THE PARADOX OF PASSIVE ALPHA – PASSIVE HEDGE FUNDS MANAGEMENT

Kate Wilkie, Product Specialist for Funds and Alternative Solutions, Credit Suisse

Credit Suisse

“How wonderful that we have met with a paradox. Now we have some hope of making progress.”

Niels Bohr (1885-1962)

The word paradox is often used interchangeably and wrongly with contradiction; but whereas a contradiction asserts its own opposite, many paradoxes do allow for resolution of some kind, as long as the observer is able to question the original premises.

On that basis, herein lies the paradox: That the philosophies of alpha and the benefits of passive management can be successfully combined.

Passive hedge fund investing

Indexation is an established method of gaining low cost exposure, especially to some of the traditionally more efficient markets. This type of investing was proposed by Dr Samuelson in his 1974 article entitled “Challenge to Judgment” published in the Journal of Portfolio Management. Investors might choose to take an indexed approach to gain broad diversification in a relatively inexpensive manner, allowing market beta to provide performance, rather than pursuing alpha or outperformance. Passive investing is a newer phenomenon outside traditional markets and a lively debate has evolved around hedge fund indexing (Brooks and Kat, 2001) which would appear to be somewhat of a contradiction in terms given that investors typically access hedge funds to gain access to alpha and the individual skill set of the manager. Hedge fund managers are often expected to provide lowly correlated returns to equities and bonds due to additional trading flexibility via the use of short positions and leverage and have traditionally operated in a relatively opaque industry.

Hedge fund indexing differs from traditional indices in the amount of effort involved in calculating and maintaining the indices. For example, manager data is not as readily available as the exchange traded instruments used by typical asset class indices. In the absence of a central depository of information (such as a stock exchange in the case of listed equities), databases of hedge fund performance and the indices themselves have to be constructed.

Tomeo et al (2005) examined a number of different providers of hedge fund indices and the different construction methodology employed and arrived at several conclusions:

- Hedge fund indices provide a valuable service in attempting to quantify the performance of various hedge fund styles, and typically provide a level of transparency and liquidity over and above that of most fund of funds. However, their success in doing so varies significantly from one index provider to another, and is primarily a function of index composition and rules-based methodology.
- There are both theoretical and practical barriers to implementing an index approach in the hedge fund universe. Practically speaking, hedge fund indices are difficult to create,

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maintain, and replicate. Also, there are challenges to creating investable, liquid vehicles for investors.

In constructing the Credit Suisse/Tremont index suite, Credit Suisse employs very specific transparency requirements from underlying managers. Each underlying manager must first provide a copy of their prospectus, historical monthly net performance and assets since inception, and a copy of the most recent audited financial statements. Once approved for inclusion in the broad index, all underlying hedge funds are required to submit monthly performance and asset information. For the Credit Suisse/Tremont investable indices, in addition to the monthly updates, we also ask for more frequent performance estimates. The majority of member funds also have to go through a rigorous operational due diligence check before they can join the indices. On an on-going basis, the hedge funds' trading style, strategy and performance are monitored by the index team.

Despite the necessary manual construction, hedge fund index products exist and continue to proliferate and evolve (Gehin and Vaissie 2007 provide an overview of a number of recent developments with respect to hedge fund index products). A recent development is the launch of specialty indices such as the Credit Suisse/Tremont LEA Index which focuses on emerging markets: Latin America, Eastern Europe, Middle East Africa and Asia.

When trying to index “active managers” such as hedge funds, rather than asset classes there are a number of important differences. The Credit Suisse/ Tremont Hedge Fund Indices seek similar goals and apply similar construction methodologies to that of traditional indices in equities or bond markets, which have proven and commonly accepted standards. Asset classes like equities or bonds behave typically more homogeneously with identifiable characteristics and associated risk premiums. Hedge funds are premised on the skill of the manager to generate alpha and employ a wide range of trading strategies. Hedge fund managers invest in existing asset classes and are able to change their allocations on an opportunistic basis and as such are more dynamic and heterogeneous in nature (Kat 2003).

Some general characteristics of hedge fund indexing are:

- Hedge fund index providers typically charge lower fees than that charged by active fund of fund managers. This reflects the passive investment approach and is analogous to the differential between fees charged by passive index tracking funds versus mutual funds. For example, the Credit/Suisse Tremont Hedge Index Tracking portfolio has a management fee of 1% over the underlying managers fees (who often charge a 1.5% management and 20% performance fees (Business Week 2005)). Compare this to active fees where a client may be paying 1% + 10% for an active fund of hedge funds (“FoHF”) manager, on top of the underlying managers’ fees.
- Some research indicates that investable indices tend to underperform the broader aggregate (non-investable) indices (Gehin and Vaissie 2007). Apart from the differences in asset allocation and index methodology, some commentators have attributed this to survivorship bias. We will expand on this and examine whether these comments are justified below.
- There is some research indicating that the total amount of alpha (defined as “non-replicable” by factor analysis) may be coming down. For example, Zhong (2008) finds that rather than a decline in average alpha being due to an increasing number of managers that do not add alpha, or are relatively unskilled, it is rather attributable to capacity constraints at both the fund and strategy level. Hence this could affect any index of “active managers”.

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- Despite all this, we note that there are some investable index linked products, such as the Credit Suisse/Tremont Hedge Index Tracker that have successfully tracked the broader non-investable aggregate indices with actual risk-adjusted returns superior to a number of FoHF over a multi-year period. The below table illustrates this point:

Return Analysis

(Statistics calculated from net monthly returns dating from July 2002 through May 2008 unless otherwise designated.)

	Hedge Index Tracker Net	InvestHedge Global Multi-Strategy US\$ (FoF) Index	HFRI FoF Composite Index	Eurekahedge Fund of Funds Index
Cumulative Return	58.1%	50.7%	53.3%	55.3%
Annualized Return	8.0%	7.2%	7.5%	7.7%
Annualized Standard Deviation	3.8%	3.8%	4.4%	4.3%
Sharpe Ratio	1.4	1.2	1.1	1.1
Maximum Drawdown	-3.4%	-3.9%	-5.3%	-5.2%
Best Month	2.7%	3.0%	3.1%	3.0%
Worst Month	-2.0%	-2.5%	-2.9%	-2.8%
Percent Positive Months	73%	77%	73%	75%
Correlation to Credit Suisse Tremont Hedge Fund Index	0.99	0.97	0.97	0.97

Sources: Credit Suisse Tremont Index LLC, Eurekahedge, InvestHedge. All data was obtained from publicly available information, internally developed data and other third party sources believed to be reliable. Credit Suisse has not sought to independently verify information obtained from public and third party sources and makes no representations or warranties as to accuracy, completeness or reliability of such information.

The net performance numbers for the Hedge Index Tracker are estimates and are net of 1% management fee and expenses.

An index measures the average return experienced by its constituents while providing a mode of comparison to the performance of the industry. Above all, an index should be representative of its investment universe. Considering hedge fund indices do capture manager specific alpha, indexing may be a very cost effective, transparent way to gain access to a representative sample of hedge funds capturing all returns generated by those funds. Hedge fund indices may appeal to investors because they address some of the most problematic elements of hedge fund investing resource intensive manager selection and monitoring in an opaque industry, as well as providing a potential source of liquidity and often greater levels of transparency due to rules based portfolio construction criteria.

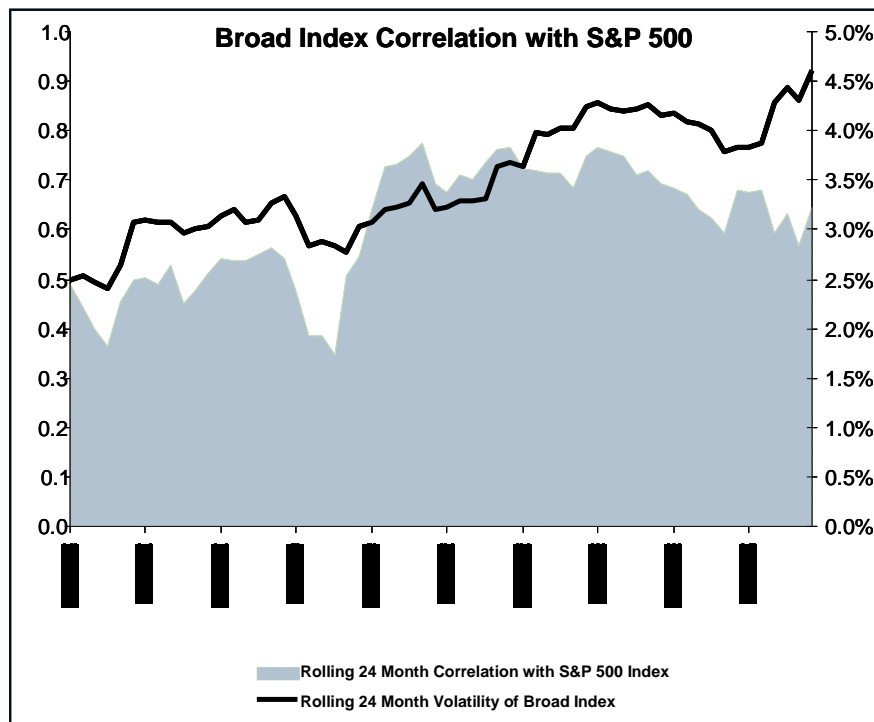
Alpha versus beta

As indices seek to represent the performance of their investment universe, hedge fund indices can be referred to as “alternative beta”, whereby beta represents the market and in this case the market comprises managers who use alternative techniques such as short selling and leverage. Alternative beta extends the idea of traditional passive investing into the alternative investment arena (see wikipedia.org) and equity market beta might be referred to as “traditional beta”. There has been considerable debate over whether the hedge fund market is becoming more efficient and the relative contributions of alpha versus beta for hedge funds that can be expected going forward (Zhong 2008 among others). Since it is believed that a rising number of hedge funds have crowded

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many successful strategies and diminished the manager specific alpha in those sectors, it seems logical that beta has driven some hedge fund returns. For example, research by Fung and Hsieh (1997) has shown significant elements of common market factors in hedge fund returns and contributed to this debate. In this widely recognised study, Fung and Hsieh perform a style analysis using monthly returns of mutual funds and hedge funds and found that five mutually orthogonal principal components explained on average 43% of the return variation in a sample of hedge funds, but that the returns on these factors are related to traditional benchmarks in a nonlinear way. In contrast, traditional benchmarks had much greater explanatory power over the mutual fund's returns examined in the study. That traditional market factors have some explanatory power over hedge fund returns should not come as a surprise as hedge funds invest in the same asset classes as mutual funds, but typically have a greater degree of trading flexibility.

The hedge fund industry often generates comment in the press in terms of performance when markets are not exhibiting sustainable trends over a prolonged period of time (for example International Herald Tribune August 4 2005 "Funds in brief, Hedge fund assets decline worldwide"). Criticism is also levelled where hedge funds are not seen to be providing the diversification benefits widely expected of them. The increasing correlations of hedge funds with the equity markets over recent years is illustrated in the below chart:



Sources: Bloomberg, Credit Suisse Index Co., Inc

Investors have certainly become more aware of the high management and performance fees they pay for returns, and a double layer of such fees with fund of fund investing. This sensitivity to fees is probably the single most important factor that has led to a more perceptive environment for indexation. One eventuality might be that the industry goes through a cycle where fees will have to be adjusted to meet performance standards. Successful funds may charge more than many of the

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low performers that will have to adjust their fees downward, which in turn could lead to a flight of talent and an increased number of funds closing. Once such a shakeout were to complete, the percentage of manager specific alpha in the industry might rise again.

Some criticisms of hedge fund indices

One often heard comment is that investable hedge fund indices tend to underperform due to biases such as survivorship bias (Gehin and Vaissie 2007). Investable and broad indices are often compared to one another, and many people may speculate on the differences in returns. Typically the broad versus investable indices are constructed differently in terms of constituents and asset allocation. While the difference in the allocation to the individual strategies is easy to follow, the differences derived from the constituent funds are not as obvious. Investable indices require funds to be open and meet certain criteria such as liquidity. The broad indices include both open and closed funds, are not subject to liquidity constraints as they are uninvestable and are designed to be representative of the entire industry. The result is that investable indices are representative of the current investment opportunities for investors, derived from a different or smaller eligible universe of hedge funds. Survivorship bias is an often misunderstood criticism of hedge fund indices. It is most prevalent in databases and research carried out on that data. To the extent indices do not properly address survivorship bias in their construction it is of course a legitimate concern.¹

The Credit Suisse/Tremont Hedge Index Tracker manages to track the non-investable broad index quite closely employing proven portfolio model concepts to reach this objective since inception in June 2002. While hedge fund blowups of individual constituents can and will occur within indices and the tracking portfolios, the effects of such blowups are generally limited due to broad diversification and the relative size of each position within the index or portfolio. In other words, the vast diversification of the portfolio limits the impact. In addition, monthly reviews and frequent rebalancing ensure positions do not grow more than a representative size within index tracking portfolios.

It should be noted that often active fund of funds criticize the non-investable index as performing too well because of biases, yet the very same group attacks investable indices for not delivering the performance of the non-investable counterpart. For the tracking portfolio Credit Suisse have a very successful record over 5 years of tracking the broad index. The tracking portfolio currently has a 98% correlation to our non-investable broad index since inception.

Credit Suisse employs standard optimisation techniques for indexing as might a passive manager in the traditional space to minimize tracking error. The covariance matrices are typically derived using a back history of three to five years, exponentially weighted with an 18 month half-life. There are however a number of additional constraints we face when indexing active managers rather than traditional assets, for example, in terms of selection and capacity. Constraints on the optimization may include liquidity considerations, minimum/maximum subscription/redemption requirements, investment availability/capacities (i.e., quarterly subscription frequency funds may not be available off quarter) and portfolio guidelines limiting proxy weights within an optimized strategy solution to relate to the weights of the

corresponding Index member funds. No expectation of future hedge fund performance is implied within the model. These constraints may lead to tracking error in the portfolio, but with sound optimization techniques, the effect can be minimized. Our modelling tools take these constraints into consideration throughout the allocation process. Post-optimization analysis includes quantitative measures such as backtesting, sensitivity analysis, and risk/return and correlation analysis on the

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optimized results. Qualitative refinement may include operational due diligence and limited subjective oversight. Operational and subjective constraints may include, but are not limited to, instances such as regulatory review or investigation, significant strategy changes²observed through outlier analysis or discretionary review, or material staff departures. Should subjective constraints be necessary, these constraints are subsequently applied to the optimization model, and the process is repeated. The optimization model is rerun until the portfolio of “best fit” is found. The rerun of the optimization model allows the optimizer to redistribute an allocation that previously was allocated to a newly constrained proxy across other available proxies. Discretionary allocation of the remainder weights post constraint is generally not performed.

Hedge fund indices in a portfolio context

Hedge fund indices allow investors access to a core highly diversified, multi-strategy position on a relatively cost efficient basis. Active managers are then often added as an alpha source through either strategy specific allocations or single manager investments as satellites around the highly diversified core holding in the index. Many investors with experience with enhanced indexing or ETFs in traditional asset classes, might be candidates for hedge fund index products. Investors seek broad exposure to the asset class and at the same time want to limit any administrative burden. Estimates of assets managed by investment vehicles linked to hedge fund indices is approximately USD10 billion (Gehin and Vaissie 2007).

In terms of portfolio construction, the question of what proportion of a portfolio investors should allocate towards passively managed hedge fund exposure is common. Investors on average allocate a small amount of their overall portfolio, about five to fifteen percent, to hedge fund strategies in an attempt to capture alpha which other investment strategies do not capture. A core multi-strategy fund of fund position can be replaced more cost efficiently with an index tracking fund without compromising on returns. In most portfolios this level does not exceed 10%, so perhaps half of that position can be replaced. It is important to consider that investors who allocate to a number of FoHF may be creating their own quasi-index and could certainly generate more efficient returns by simply investing in a passive hedge fund index and supplementing that investment with high alpha managers as satellites.

Conclusion

In conclusion and back to the paradox of whether passive management and alpha can be successfully combined, we believe that aggregating hedge funds into an index will maintain an exposure to manager specific alpha. There will be beta components to the index and industry, but nevertheless passive management can successfully deliver alpha of the underlying hedge funds to investors. An index of alpha-generating hedge funds should, by definition, pass on alpha to an index investor.

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ENDNOTES

¹ For an index this means that when calculating backdata funds that subsequently went out of business but would have qualified at the point in time need to be included. Additionally, the performance of funds that “die” needs to stay in the index. Survivorship bias is a matter of the index construction, neither traditional nor hedge fund indices should permit a survivorship bias to build up. As a guideline, any index should have objective and clear index rules describing the addition and deletion of member funds at the rebalance and should disallow the retrospective change of historical index performance, thus eliminating survivorship bias in its index construction. All funds that report to an index at the beginning of the index’s reporting period should not be removed from the historical returns for any reason.

² We take careful and educated consideration when designing our strategy classifications and subsequent assignment of funds within a classification. We monitor the style drift of the Broad Index member funds through quantitative analysis to observe statistical changes through outlier analysis, drawdown analysis, and beta estimation. Because the classification of each fund into one of the ten sectors that comprise the Broad Index determines the selection process for the Hedge Index Tracker, the investment strategy of each fund is monitored on an ongoing basis. On an annual basis, Tremont conducts appropriate statistical checks (such as cluster analysis, covariance analysis, etc.) on the validity of the sector classification of funds in the Broad Index, with the objective of identifying potential misclassifications. Funds that appear to be statistical outliers, or that show evidence of potential misclassification, will be investigated further for possible reclassification into a more appropriate sector. We additionally have the advantage of being embedded in a larger organization with the resources of the discretionary fund of funds teams at both Credit Suisse and Tremont who aid in our strategy classifications process.

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